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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/754,277 | 01/05/2001 | Takayoshi Sawayama | OKI.201 | 3046 |

7590 02/13/2002

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EXAMINER

ALEJANDRO MULERO, LUZ L

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1763

DATE MAILED: 02/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/754,277

Applicant(s)

SAWAYAMA, TAKAYOSHI

Examiner

Luz L. Alejandro

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1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 2 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 7/26/2000. It is noted, however, that applicant has not filed a certified copy of the 225686 application as required by 35 U.S.C. 119(b).

Specification

The abstract of the disclosure is objected to because the abstract is not one paragraph. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: at page 2 - lines 7 and 13, seems that "Fig. 5" should read -- Fig. 2 --; also, in page 6-line 19, seems that "Fig. 1" should read -- Fig. 3 --.

Appropriate correction is required.

Drawings

Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Election/Restrictions

Applicant's election without traverse of the invention of specie B, claims 3-7, in Paper No. 3 is acknowledged. Claims 1-2 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a non-elected specie, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3-4 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 3-4 are rejected as being a "single means" claim (see MPEP 2164.08(a)). A single means claim covers every conceivable means for achieving the stated purpose but the specification only discloses at most those means known to the inventor. Therefore, the claims are non-enabling and are subject to an undue breadth rejection under the enablement section of 35 USC 112, first paragraph. A suggestion to overcome this rejection is to add at the beginning of line 3 in claim 3 as a first limitation -- an upper electrode; and a --. In addition to this, at the present line 3 of claim 3, "an" will need to be replaced with -- said -- for proper antecedent basis.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3-line 4, and claim 5-line 5, the use of the word "type" renders the claim indefinite. The addition of the word "type" to an otherwise definite expression extends the scope of the expression so as to render it indefinite (see *Ex parte Copenhaver*, 109 USPQ 118 (Bd. App. 1955)).

In claim 4-line 5, and claim 7-line 5, it appears that the phrase "semiconductor wafer" should be replaced with -- processing chamber -- since it is clear that the gases are actually introduced into the chamber and not into the wafer.

Once a limitation is introduced in a claim, subsequent use of that limitation must use either -- the -- or -- said --, or be appropriately differentiated to represent a different limitation. Note the terms "means for detecting pressure" in claim 4, lines 6-7, "first pressure detection means" in claim 4, lines 6-7, and "second pressure detecting means" in claim 7, lines 9-10. With respect to claim 4, it is suggested that "and" in line 6 be replaced with -- wherein said --; and with respect to claim 7, it is suggested that "and" in line 6 be replaced with -- wherein said --, and -- said -- be inserted after "wherein" in line 9. Also, if the claims are amended as suggested above, the term ", which" should be deleted from claim 4-line 7, and claim 7-line 7, for clarity of the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Admitted prior art in view of Loan et al., U.S. Patent 6,296,711 B1.

Admitted prior art shows the invention substantially as claimed including a parallel plate etching apparatus having electrodes 6,7 wherein the upper electrode 6 comprises a cooling plate 2 having a plurality of gas supply holes 3 for supplying the gas, a gas introducing plate 4 having gas holes 3 for introducing the gas into a processing chamber 9, and a jig 5 for fixing said gas introducing plate 4 (see Figure 1 and page 1-line 15 to page 2-line 3 of applicant's specification).

Admitted prior art lacks anticipation of the first pressure detecting means provided between the gas introducing plate and the cooling plate (the area behind the gas introducing plate), the second pressure detecting means in the etching-processing chamber, and means for detecting the difference between the first and second pressure detecting means. Loan et al. discloses an apparatus using pressure sensors 51 and 53 (see fig. 1B), whereby pressure sensor 51 is used to measure the pressure behind a gas introducing plate 72, and pressure sensor 53 is used to measure the pressure in the processing chamber (see col. 13-lines 62-67 and fig. 1B). Furthermore, the difference between pressure sensors 51 and 53 is determined as shown in Figure 5G, to control or

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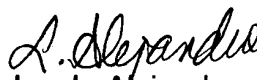
monitor the process (see col. 15-lines 61-65). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate pressure sensors behind the gas introduction plate and in the chamber of the Admitted prior art, and incorporate means for determining the difference between the pressures detected by the pressure sensors because this will allow for greater controllability over the process (see col. 15-lines 64-65).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luz L. Alejandro whose telephone number is 703-305-4545. The examiner can normally be reached on Monday to Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Mills can be reached on 703-308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Luz L. Alejandro
Patent Examiner
Art Unit 1763

February 8, 2002